VENSTAR®

RESIDENTIAL
THERMOSTAT
T1700

DIGITAL THERMOSTAT

1-DAY PROGRAMMABLE UP TO 2-HEAT & 1-COOL

HEAT COOL & HEAT PUMP

CONFIGURABLE IN SETUP:
- Auto or Manual changeover
- Programmable or Non-Programmable

ENERGY STAR

- Control up to 2 Heat & 1 Cool Stages
- Backlit Display & Button Legends
- Aux Heat Indicator
- Outdoor Sensor Ready
- Accepts EZ Programmer™
- Accepts Optional IR Remote Control
- Accepts Comfort Call™ Phone Control Accessory

- Use with most Air Conditioning & Heating Systems including: 1 or 2 Stage Electric Cooling & 3 Stage Gas Heating, Heat Pump, Electric or Hydronic Heat.

OWNER'S MANUAL

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CAUTION

Follow the Installation Instructions before proceeding.
Set the thermostat mode to “OFF” prior to changing settings in setup or restoring Factory Defaults.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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c UL us
LISTED
4Z95

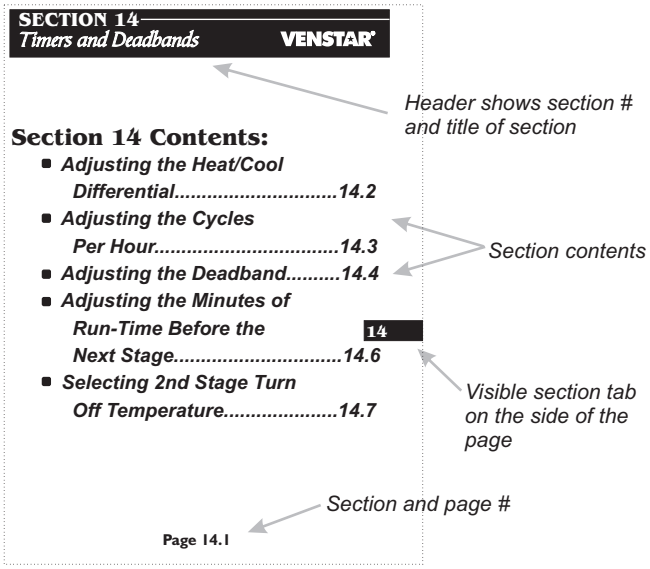
Thermostat T1700
FC Tested to Comply with FCC Standards
FOR HOME OR OFFICE USE

How to Use This Manual

VENSTAR®

The Table of Contents divides the thermostat features into sections making it easier to quickly find information.

The first page of each section contains a more detailed Contents of each section, such as the example page shown below.


SECTION 14
Timers and Deadbands
VENSTAR®
Header shows section # and title of section
Section 14 Contents:
Adjusting the Heat/Cool Differential.....14.2
Adjusting the Cycles Per Hour.....14.3
Adjusting the Deadband.....14.4
Adjusting the Minutes of Run-Time Before the Next Stage.....14.6
Selecting 2nd Stage Turn Off Temperature.....14.7
Section contents
14
Visible section tab on the side of the page
Section and page #
Page 14.1

In addition, this manual also has an Index to help you find any information regarding this thermostat quickly.

Glossary of Terms

VENSTAR®

Auto-Changeover: A mode in which the thermostat will turn on the heating or cooling based on room temperature demand.

Cool Setpoint: The warmest temperature that the space should rise to before cooling is turned on (without regards to deadband).

Deadband: The number of degrees the thermostat will wait, once setpoint has been reached, before energizing heating or cooling.

Differential: The forced temperature difference between the *heat setpoint* and the *cool setpoint.*

Heat Setpoint: The coolest temperature that the space should drop to before heating is turned on (without regards to deadband).

Icon: The word or symbol that appears on the thermostat display.

Mode: The current operating condition of the thermostat (i.e. Off, Heat, Cool, *Auto,* Program On).

Non-Programmable Thermostat: A thermostat that does not have the capability of running the *Time Period Programming.*

Programmable Thermostat: A thermostat that has the capability of running the *Time Period Programming.*

Temperature Swing: *Same as Deadband.*

Time Period Programming: A program that allows the thermostat to automatically adjust the *heat setpoint* and/or the *cool setpoint* based on the time of day.

Table of Contents

VENSTAR®

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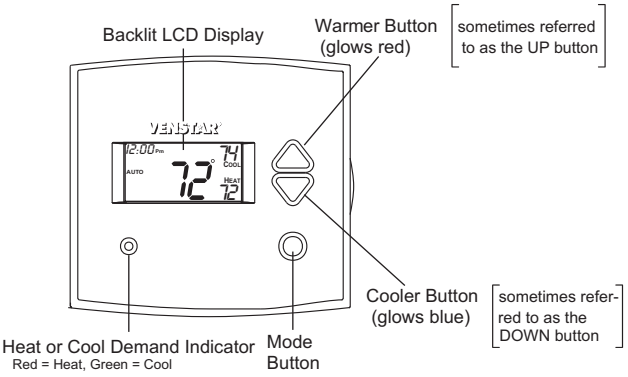
SECTION 1
Getting to Know Your Thermostat
1

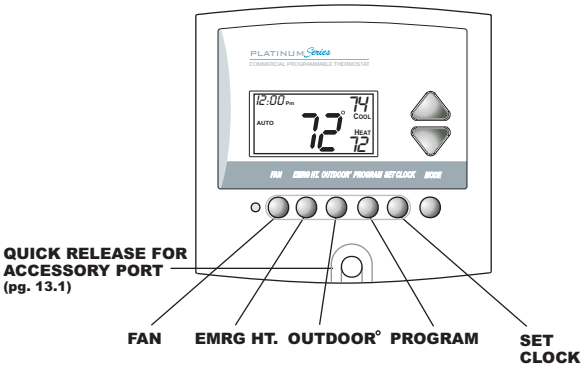
VENSTAR®

Section 1 Contents:

- *Front Panel Buttons.....1.2*
- *Display Features.....1.3*

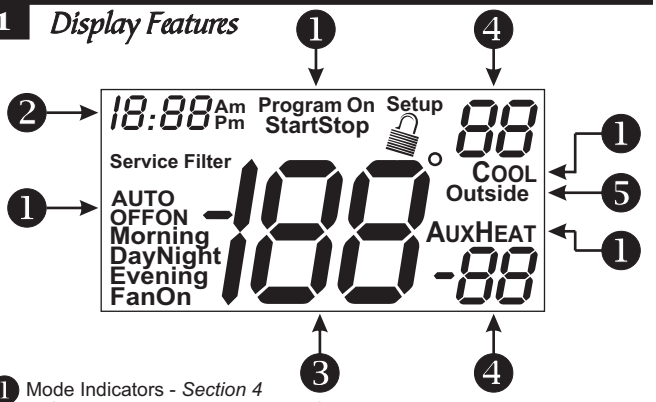
Front Panel


Backlit LCD Display
Warmer Button
(glows red)
sometimes referred to as the UP button
Cooler Button
(glows blue)
sometimes referred to as the DOWN button
Heat or Cool Demand Indicator
Red = Heat, Green = Cool
Mode
Button


QUICK RELEASE FOR ACCESSORY PORT (pg. 13.1)
FAN
EMRG HT.
OUTDOOR°
PROGRAM
SET CLOCK

VENSTAR®

1 *Display Features*



1 Mode Indicators - *Section 4*
Selects the operational mode of the equipment.
HEAT - Indicates the heating mode.
COOL - Indicates the air conditioning mode.
AUTO - Indicates the system will automatically changeover between heat and cool modes as the temperature varies.
OFF - Indicates heating and cooling is turned off.
PROGRAM ON - Indicates the time period program is enabled to run.

2 Clock - *Section 3*
Indicates the current time. This clock is also used to program the time period schedule.

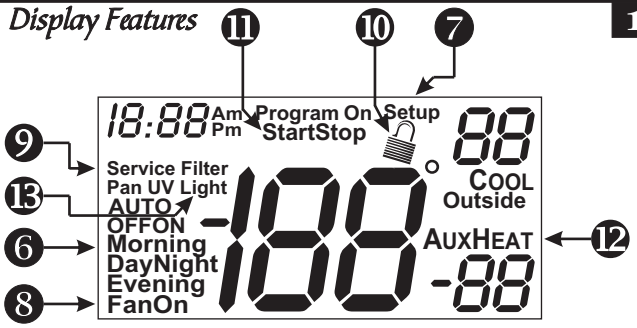
3 Room Temperature Display - *Section 5*
Indicates the current room temperature and displays the outdoor temperature when selected.

4 Desired Set Temperature - *Section 4/5*
Indicates desired room temperature(s).

5 **Outside** icon - *Section 5*
Indicates the temperature displayed is from the optional outdoor sensor.

6 **Morning**, **Day**, **Evening** & **Night** icons - *Section 6*
Indicates the day part of the time period program.

Display Features



7 **Setup** icon - *Sections 6-11*
Indicates the thermostat is in the setup mode.

8 **Fan On** icon - *Section 7*
Indicates constant, continuous fan operation.
When **Fan On** is not lit - indicates the fan will only operate when necessary to heat or to cool.

9 **Service Filter** icon - *Section 9*
Appears when the filter should be serviced under normal conditions.
Adjustable from 0 - 1950 hours of blower operation.

10 icon - *Section 8*
Indicates the keypad has been locked.

11 **StartStop** icon - *Section 6*
Appears when programming timer functions.

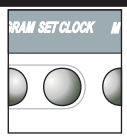
12 **AuxHeat** icon - *Page 11.4*
Indicates the Heat Pump is currently using 2nd stage electric strip heat.

13 **UV Light** icon - *Section 9*
Appears when the UV bulb should be serviced under normal conditions. Adjustable from 0 - 1990 days of operation.

Section 2 Contents:

- *Setting the Clock 2.2*
- *Selecting the Heat or Cool Mode.....2.3*
- *Selecting Your Desired Temperature.....2.4*
- *Using the Fan Button.....2.4*

Note: *Following the instructions in this section will allow you to operate your thermostat using the factory default settings. These settings are depicted in the illustrations throughout this manual.*



Press the SET CLOCK button

Setting the Clock

During Setup & Programming:

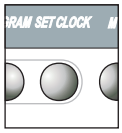
Pressing the UP or DOWN buttons will modify the flashing selection.

To adjust the Clock or Day use

Buttons.

To adjust the time by hours press and hold the FAN button while pressing the UP or DOWN buttons.

Press the SET CLOCK button to return to normal operation.



Selecting the Heat or Cool Mode

2

Select Mode by Pressing the MODE Button

Heating Only
*The **HEAT** setting indicates the temperature the room has to reach before the furnace will turn on to heat the room.*

Press **MODE**

Cooling Only
*The **COOL** setting indicates the temperature the room has to reach before the air conditioner will turn on to cool the room.*

Press **MODE**

Heating or Cooling
***AUTO** will automatically select heat or cool based on room temperature demand.*

Press **MODE**

Time Schedule for Heating or Cooling
*The **Program On** setting will activate the time period programming for the cooling or heating setpoint ONLY (Morning, Day, Evening & Night Periods).*

Press **MODE**

Off
***OFF** indicates both heating and air conditioning systems are turned off.*

Selecting Your Desired Temperature (adjusting the setpoints)

AUTO OR PROGRAM MODE

Pressing the UP or DOWN buttons in Auto **or** Program mode will adjust **both** the heat and cool set temperatures simultaneously.

Adjust the desired set temperature with the

Buttons.

HEAT OR COOL MODE

Pressing the UP or DOWN buttons in Heat **or** Cool mode will adjust only the heat **or** cool set temperature.

Adjust the desired set temperature with the

Buttons.

Using the Fan Button

Press FAN

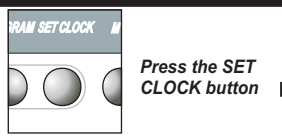
Fan On indicates constant fan operation. You may turn the fan on even if the thermostat is in the **Off** mode. Pressing the FAN button toggles this feature on or off.

3

Section 3 Contents:

- ***Setting the Clock.....3.2***

Note: *During setup & programming pressing the UP or DOWN buttons will modify the flashing selection.*



Press the SET CLOCK button

Setting the Clock

During Setup & Programming:

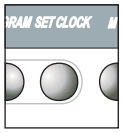
Pressing the UP or DOWN buttons will modify the flashing selection.

To adjust the Clock or Day use

buttons.

To adjust the time by hours press and hold the FAN button while pressing the UP or DOWN buttons.

Press the SET CLOCK button to return to normal operation.



4

Section 4 Contents:

- ***Programmable or Non-Programmable Thermostat.....4.2***
- ***Manual or Auto-Changeover Thermostat.....4.3***
- ***Selecting the Operating Mode.....4.4***
- ***Selecting Your Desired Temperature.....4.8***

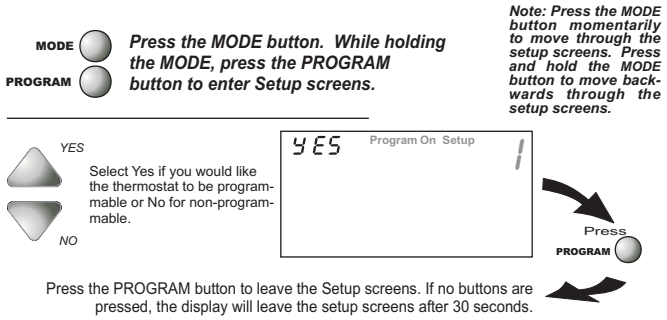
Note: *During setup & programming pressing the UP or DOWN buttons will modify the flashing selection.*

Programmable or Non-Programmable Thermostat

When the very simplest operation is desired, this thermostat may be configured to be non-programmable, with or without Auto-Changeover. Follow the step below.

If 'NO' is selected, the thermostat will lockout the Program On screen; only the Off, Heat, Cool, and Auto screens may be accessed by pressing the MODE button.

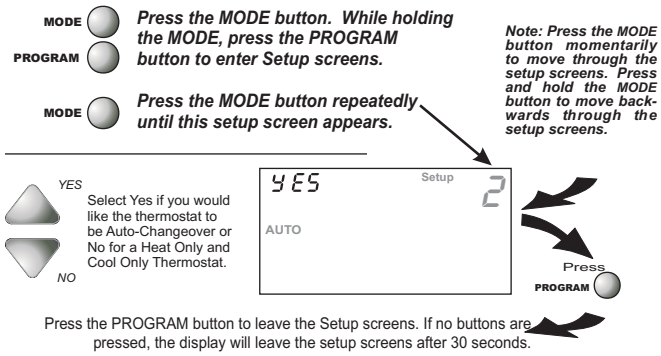
Select 'YES' if you would like your thermostat to be **programmable**, then the Program mode will be accessible through the use of the MODE button.


MODE
PROGRAM
Press the MODE button. While holding the MODE, press the PROGRAM button to enter Setup screens.
Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.
YES
NO
Select Yes if you would like the thermostat to be programmable or No for non-programmable.
YES
Program On Setup
1
Press
PROGRAM
Press the PROGRAM button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Manual or Auto-Changeover Thermostat

4 When the very simplest operation is desired, this thermostat may be configured to be a manual heat and cool thermostat, with or without time period programmability. Follow the step below.

The thermostat may be programmed to function as a Heat Only or Cool Only thermostat by selecting 'NO' in the setup screen below. This will lockout the Auto-Changeover screen and only allow the Off, Heat, Cool, and Program On screens to be accessed.


MODE
PROGRAM
Press the MODE button. While holding the MODE, press the PROGRAM button to enter Setup screens.
MODE
Press the MODE button repeatedly until this setup screen appears.
Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.
YES
NO
Select Yes if you would like the thermostat to be Auto-Changeover or No for a Heat Only and Cool Only Thermostat.
YES
Setup
2
AUTO
Press
PROGRAM
Press the PROGRAM button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Operating Mode when the Thermostat is Configured to be:

NON-PROGRAMMABLE WITH MANUAL-CHANGEOVER - If the thermostat is configured to be a non-programmable thermostat with Manual-Changeover, the following screens will be available by pressing the MODE button.

Select the Mode by Pressing the MODE Button

Heating Only

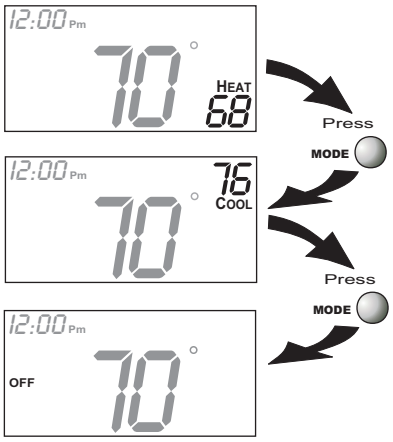
*The **HEAT** setting indicates the temperature the room has to reach before the furnace will turn on to heat the room.*

Cooling Only

*The **COOL** setting indicates the temperature the room has to reach before the air conditioner will turn on to cool the room.*

Off

***OFF** indicates both heating and air conditioning systems are turned off.*



Operating Mode when the Thermostat is Configured to be:

4 NON-PROGRAMMABLE WITH AUTO-CHANGEOVER - If the thermostat is configured to be a non-programmable thermostat with Auto-Changeover, the following screens will be available by pressing the MODE button

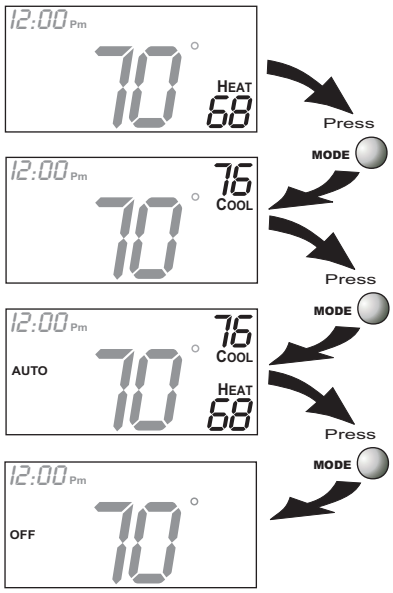
Select the Mode by Pressing the MODE Button

Heating Only
*The **HEAT** setting indicates the temperature the room has to reach before the furnace will turn on to heat the room.*

Cooling Only
*The **COOL** setting indicates the temperature the room has to reach before the air conditioner will turn on to cool the room.*

Heating or Cooling
***AUTO** will automatically select heat or cool based on room temperature demand.*

Off
***OFF** indicates both heating and air conditioning systems are turned off.*



Operating Mode when the Thermostat is Configured to be:

PROGRAMMABLE WITH MANUAL-CHANGEOVER - If the thermostat is configured to be a programmable thermostat with Manual-Changeover, the following screens will be available by pressing the MODE button.

Select the Mode by Pressing the MODE Button

Heating Only
*The **HEAT** setting indicates the temperature the room has to reach before the furnace will turn on to heat the room.*

Press MODE

Cooling Only
*The **COOL** setting indicates the temperature the room has to reach before the air conditioner will turn on to cool the room.*

Press MODE

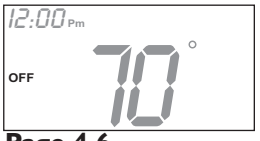
Time Schedule for Heating Only
*The **HEAT Program On** setting will activate the time period program for the heating setpoint ONLY (Morning, Day, Evening & Night Periods).*

Press MODE

Time Schedule for Cooling Only
*The **COOL Program On** setting will activate the time period program for the cooling setpoint ONLY (Morning, Day, Evening & Night Periods).*

Press MODE

Off
***OFF** indicates both heating and air conditioning systems are turned off.*



Operating Mode when the Thermostat is Configured to be:

4

PROGRAMMABLE WITH AUTO-CHANGEOVER - If the thermostat is configured to be a programmable thermostat with Auto-Changeover, the following screens will be available by pressing the MODE button.

Select the Mode by Pressing the MODE Button

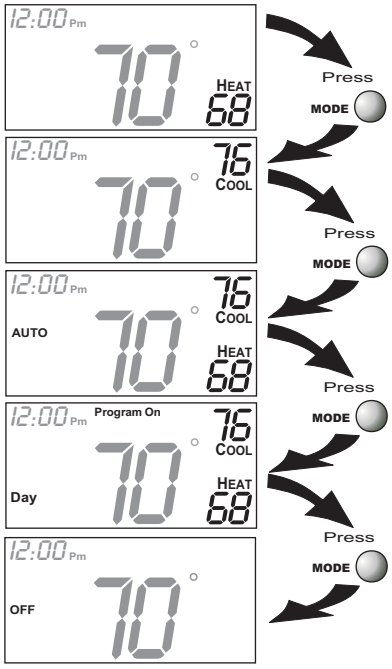
Heating Only
*The **HEAT** setting indicates the temperature the room has to reach before the furnace will turn on to heat the room.*

Cooling Only
*The **COOL** setting indicates the temperature the room has to reach before the air conditioner will turn on to cool the room.*

Heating or Cooling
***AUTO** will automatically select heat or cool based on room temperature demand.*

Time Schedule for Heating or Cooling
*The **Program On** setting will activate the time period programming for the cooling or heating setpoint ONLY (Morning, Day, Evening & Night Periods).*

Off
***OFF** indicates both heating and air conditioning systems are turned off.*



Selecting Your Desired Temperature (adjusting setpoints)

AUTO OR PROGRAM MODE

Pressing the UP or DOWN buttons in Auto **or** Program modes will adjust **both** the heat and cool set temperatures simultaneously. For more information on this see page 11.2.

Adjust the desired set temperature with the

buttons.

HEAT OR COOL MODE

Pressing the UP or DOWN buttons in Heat **or** Cool modes will adjust only the heat **or** cool set temperature.

Adjust the desired set temperature with the

buttons.

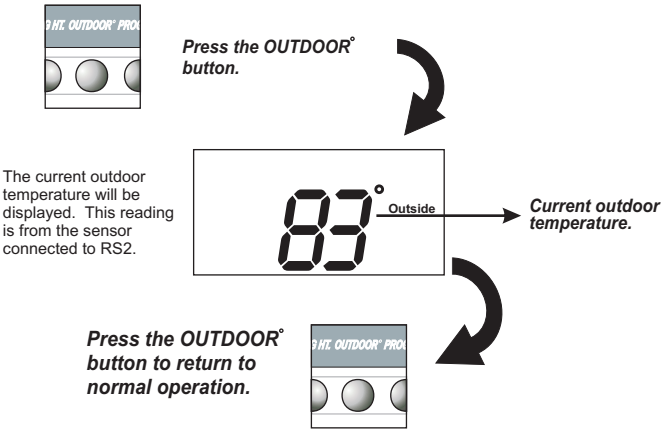
5

Section 5 Contents:

- *Viewing the Outdoor Temperature.....5.2*

Viewing the Outdoor Temperature

This requires an outdoor sensor (optional accessory) to be installed (*see page 4.6 of the Installation Instructions*). To read the temperature from the Outdoor Sensor, press the OUTDOOR° button. The display will then show the current outdoor temperature.


Press the OUTDOOR° button.
The current outdoor temperature will be displayed. This reading is from the sensor connected to RS2.
83°
Outside
Current outdoor temperature.
Press the OUTDOOR° button to return to normal operation.

Note: If no sensors are connected 2 dashes [- -] will appear on the display.

SECTION 6
Programming the Daily Schedule

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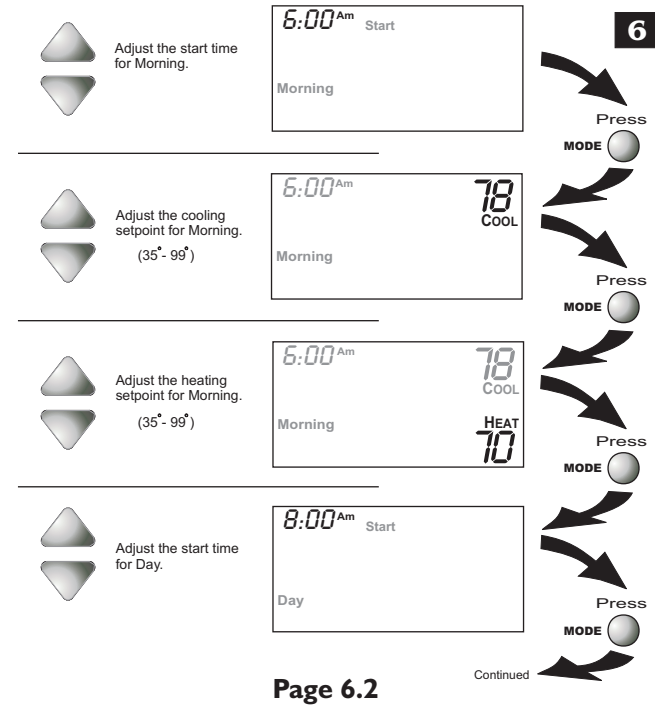
Section 6 Contents:

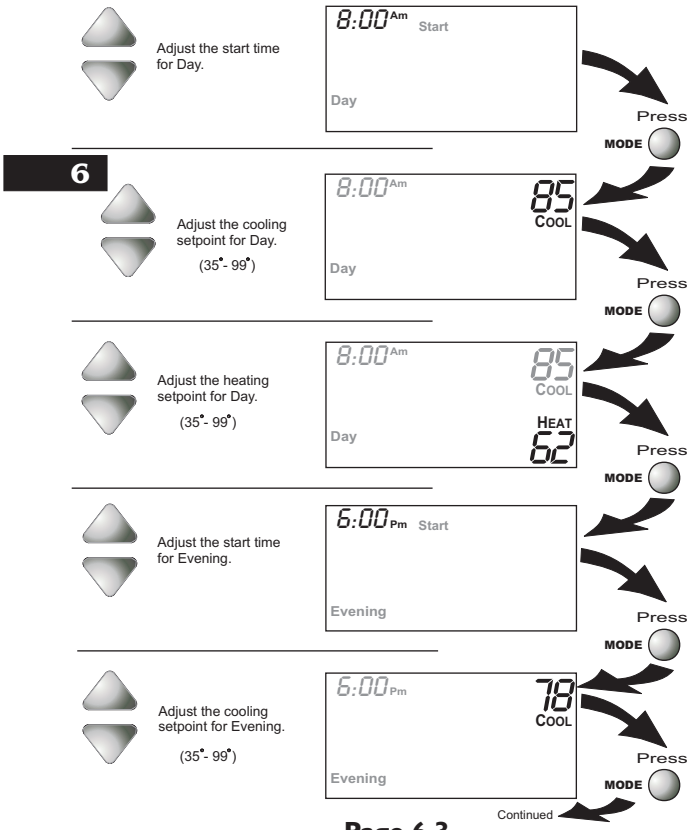
6 ■ *Programming a Daily Schedule.....6.2*

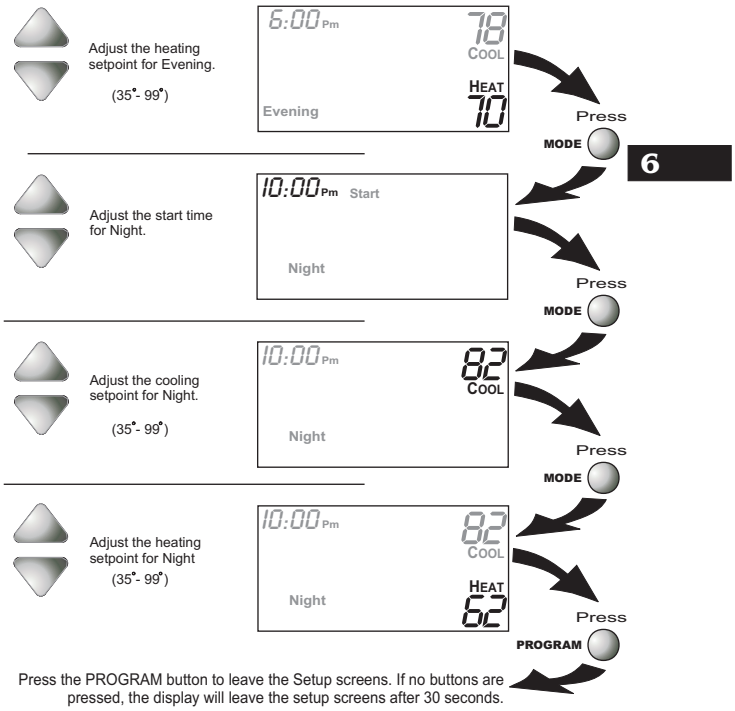
Programming a Daily Schedule

Press
PROGRAM

Press the PROGRAM button to enter time period programming.




Adjust the start time for Day.
8:00 Am Start
Day
Press MODE
6
Adjust the cooling setpoint for Day.
(35°- 99°)
8:00 Am
85 COOL
Day
Press MODE
Adjust the heating setpoint for Day.
(35°- 99°)
8:00 Am
85 COOL
HEAT 62
Day
Press MODE
Adjust the start time for Evening.
6:00 Pm Start
Evening
Press MODE
Adjust the cooling setpoint for Evening.
(35°- 99°)
6:00 Pm
78 COOL
Evening
Press MODE
Continued


Adjust the heating setpoint for Evening.
(35°- 99°)
6:00 Pm
78
COOL
HEAT
70
Evening
Press
MODE
Adjust the start time for Night.
10:00 Pm
Start
Night
Press
MODE
Adjust the cooling setpoint for Night.
(35°- 99°)
10:00 Pm
82
COOL
Night
Press
MODE
Adjust the heating setpoint for Night
(35°- 99°)
10:00 Pm
82
COOL
HEAT
62
Night
Press
PROGRAM
Press the PROGRAM button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

SECTION 7
Programming the Fan Operation

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Section 7 Contents:

7
- *Using the Fan Button.....7.2*
- *Setting the Fan-Off Time Delay.....7.3*

Using the Fan Button

When the fan is set for automatic operation it will energize any time there is a call for heating or cooling, otherwise the fan will remain off. Pressing the FAN button will energize the fan and display the **FanOn** icon on the thermostat display. To operate the fan in the automatic mode, press the FAN button again and the FanOn icon will disappear.

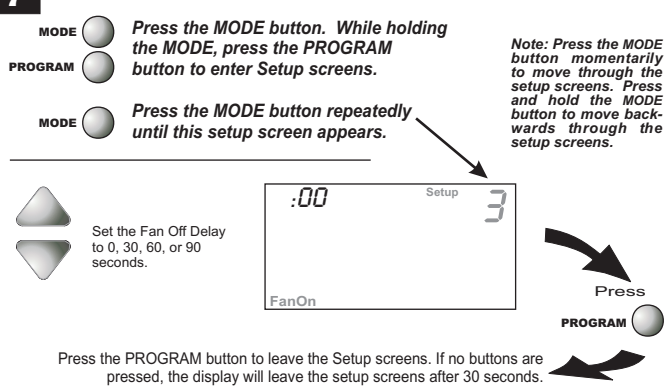
Press
FAN

Fan On indicates constant fan operation. You may turn the fan on even if the thermostat is in the **Off** mode. Pressing the FAN button toggles this feature on or off.

Setting the Fan-Off Time Delay

To increase the cooling efficiency of your unit, the thermostat may be programmed to continue running the fan after a call for cooling has been satisfied. This delay may be set for 30, 60, or 90 seconds. If the Fan Off Delay is set for zero seconds, the fan will not energize after a call for cooling has been satisfied.

7


MODE
PROGRAM
Press the MODE button. While holding the MODE, press the PROGRAM button to enter Setup screens.
MODE
Press the MODE button repeatedly until this setup screen appears.
Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.
:00
Setup
3
FanOn
Set the Fan Off Delay to 0, 30, 60, or 90 seconds.
Press
PROGRAM
Press the PROGRAM button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Section 8 Contents:

- *Turning On/Off the Backlight.....8.2*
- *Programming the Thermostat to Display Temperature in Fahrenheit or Celsius.....8.2*
- *Locking/Unlocking the Keypad.....8.3*

Turning On/Off the Backlight

MODE
PROGRAM

Press the MODE button. While holding the MODE, press the PROGRAM button to enter Setup screens.

MODE

Press the MODE button repeatedly until this setup screen appears.

Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.

8

Select backlight operation:
AUTO - Light from 6pm to 6am nightly.
ON - Light continuously.
OFF - Light for 8 seconds after a button press.

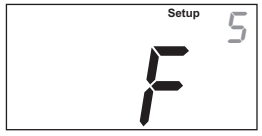
Press
MODE

Programming the Thermostat to Display Temperature in Fahrenheit or Celsius

C

Select thermostat operation in degrees **F**ahrenheit or **C**elsius.

F



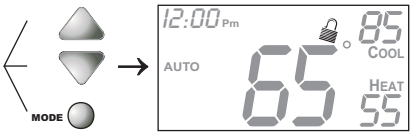
Press
PROGRAM

Press the PROGRAM button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Locking/Unlocking the Keypad

To prevent unauthorized use of the thermostat, the front panel buttons may be disabled. To disable, or 'lock' the keypad, press and hold the MODE button. While holding the MODE button, press the UP and DOWN buttons together. The icon will appear on the display, then release the buttons.

Press all three buttons in the order outlined above for keypad lockout



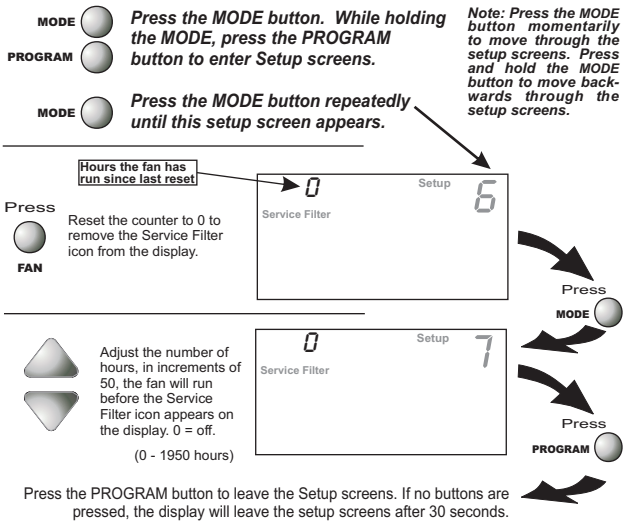
To ***unlock*** the keypad, press and hold the MODE button. While holding the MODE button, press the UP and DOWN buttons together. The icon will disappear from the display, then release the buttons.

Section 9 Contents:

- *Setting and Resetting the Service Filter (Fan Run-Time) Alert.....9.2*
- *Setting and Resetting the UV Light Run-Time Alert.....9.3*

How to Set and Reset the Service Filter (Fan Run-Time) Alert

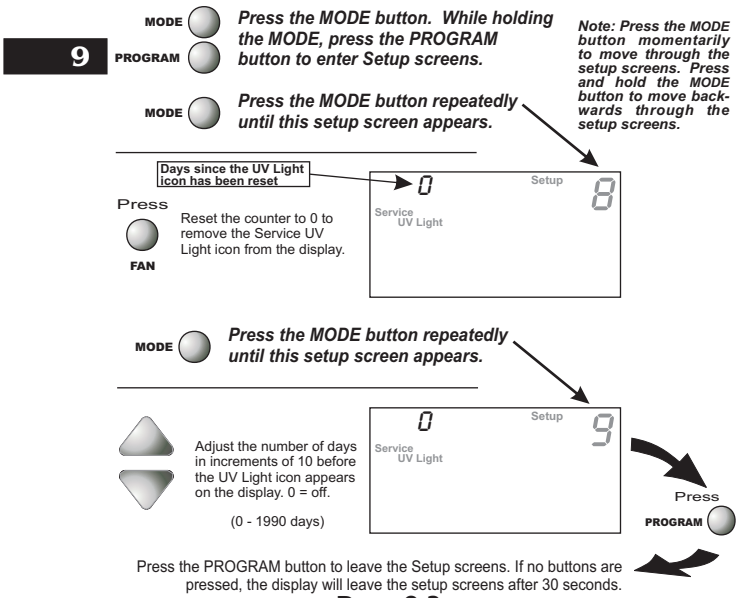
This counter keeps track of the number of hours of fan run-time whether the fan is energized in the Heating or Cooling modes, or in stand alone fan operation. The Service Filter icon will appear after the preset number of hours of fan run-time in step #7 (*below*) has been achieved. Setting this counter to zero in step #7 will prevent the Service Filter icon from ever appearing.


MODE
PROGRAM
Press the MODE button. While holding the MODE, press the PROGRAM button to enter Setup screens.
Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.
MODE
Press the MODE button repeatedly until this setup screen appears.
Hours the fan has run since last reset
0
Setup
6
Service Filter
Press
FAN
Reset the counter to 0 to remove the Service Filter icon from the display.
Press
MODE
0
Setup
7
Service Filter
Adjust the number of hours, in increments of 50, the fan will run before the Service Filter icon appears on the display. 0 = off.
(0 - 1950 hours)
Press
PROGRAM
Press the PROGRAM button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

How to Set and Reset the UV Light Run-Time Alert

This counter keeps track of the number of days since the UV Light counter has been reset. The UV Light icon will appear after the number of days has been achieved, as shown in step #9 (*below*). Setting the counter to zero in Step #9 will prevent the Service UV Light icon from ever appearing.

9

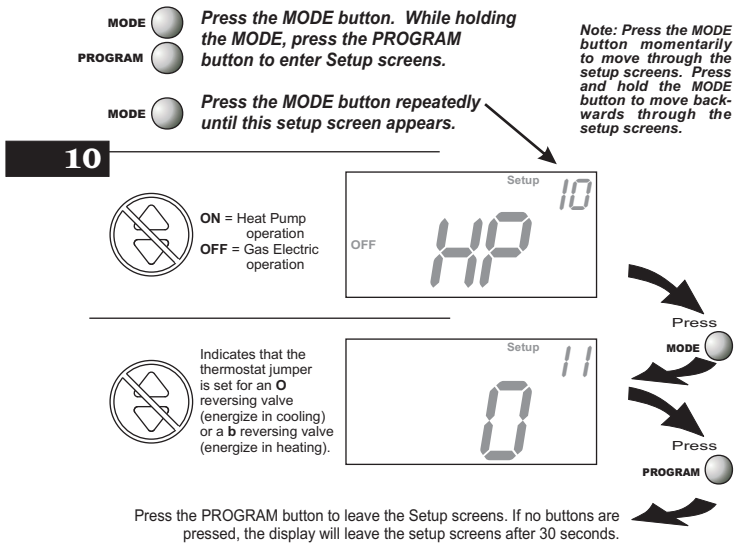

MODE
PROGRAM
Press the MODE button. While holding the MODE, press the PROGRAM button to enter Setup screens.
Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.
MODE
Press the MODE button repeatedly until this setup screen appears.
Days since the UV Light icon has been reset
0
Setup
8
Service
UV Light
Press
FAN
Reset the counter to 0 to remove the Service UV Light icon from the display.
MODE
Press the MODE button repeatedly until this setup screen appears.
0
Setup
9
Service
UV Light
Adjust the number of days in increments of 10 before the UV Light icon appears on the display. 0 = off.
(0 - 1990 days)
Press
PROGRAM
Press the PROGRAM button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Section 10 Contents:

- *Viewing the Heat Pump and Reversing Valve Jumper Setting.....10.2*
- *Viewing the Electric Heat Jumper Setting.....10.3*
- *Using Emergency Heat.....10.4*

Viewing the Heat Pump and Reversing Valve Jumper Settings

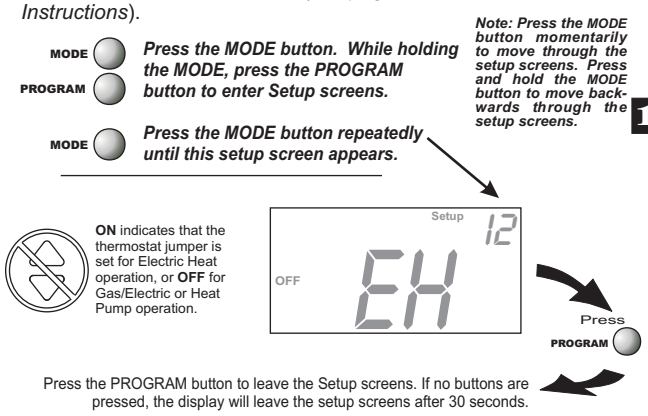
Steps 10 and 11 are 'Read Only' and may only be set with the jumpers on the circuit board of the thermostat.


MODE
PROGRAM
Press the MODE button. While holding the MODE, press the PROGRAM button to enter Setup screens.
Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.
MODE
Press the MODE button repeatedly until this setup screen appears.
10
Setup
10
OFF
HP
ON = Heat Pump operation
OFF = Gas Electric operation
Press
MODE
Setup
11
0
Indicates that the thermostat jumper is set for an O reversing valve (energize in cooling) or a b reversing valve (energize in heating).
Press
PROGRAM
Press the PROGRAM button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Viewing the Electric Heat Jumper Setting

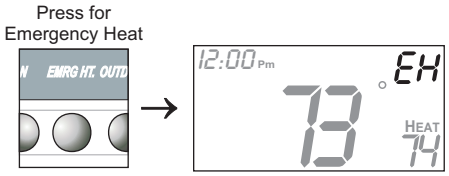
Placing the jumper on ELEC will cause the thermostat to turn on the fan immediately any time there is a heat demand. Since most gas furnaces control the fan, this feature should be off unless it is necessary for the thermostat to energize the fan with first stage heat.

Step 12 is 'Read Only' and may only be set with the jumpers on the circuit board of the thermostat (*see page 4.3 of the Installation Instructions*).


MODE
PROGRAM
Press the MODE button. While holding the MODE, press the PROGRAM button to enter Setup screens.
Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.
MODE
Press the MODE button repeatedly until this setup screen appears.
ON indicates that the thermostat jumper is set for Electric Heat operation, or OFF for Gas/Electric or Heat Pump operation.
Setup
12
OFF
EH
Press
PROGRAM
Press the PROGRAM button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Using Emergency Heat

ENTER EMERGENCY HEAT: Only available if you have a Heat Pump installed. To initiate the Emergency Heat feature, press the EMER HT. button. The Cool setpoint display will read 'EH' (emergency heat).



OPERATION: During Emergency Heat operation the thermostat will turn on the fan and the 2nd stage of heat when there is a demand for heat. Also during Emergency Heat the 1st stage of heating or cooling will be unavailable.

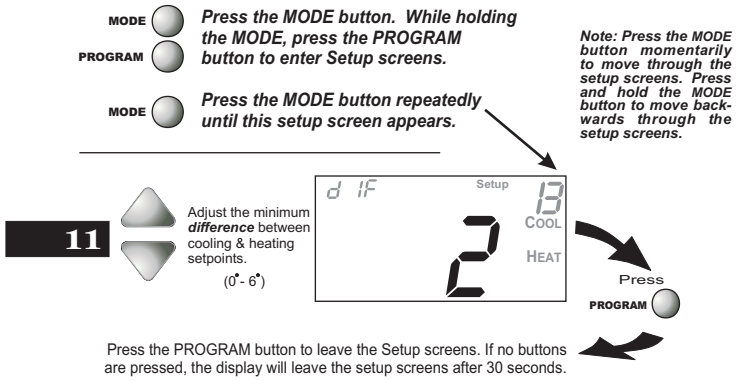
EXIT EMERGENCY HEAT: Follow the same steps as entering Emergency Heat by pressing the EMER HT. button. During Emergency Heat, only OFF and HEAT modes are available by pressing the MODE button.

Section 11 Contents:

- *Adjusting the Heat/Cool Differential.....11.2*
- *Adjusting the Cycles Per Hour.....11.3*
- *Adjusting the Deadband.....11.4*

Adjusting the Heat/Cool Differential

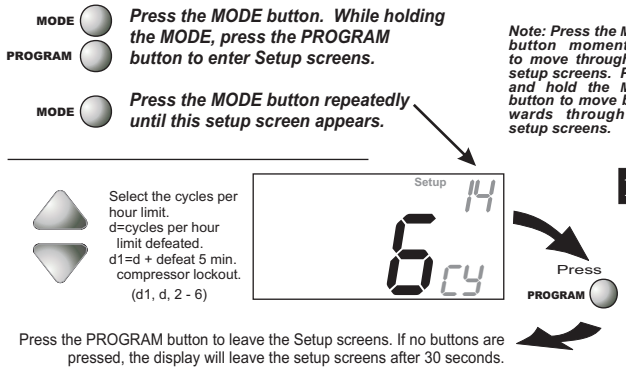
The Heat and Cool setpoints will not be allowed to come any closer to each other than the value in this step. This minimum difference is enforced during Auto-Changeover operation.


MODE
PROGRAM
Press the MODE button. While holding the MODE, press the PROGRAM button to enter Setup screens.
MODE
Press the MODE button repeatedly until this setup screen appears.
Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.
11
Adjust the minimum difference between cooling & heating setpoints.
(0° - 6°)
d iF
Setup
13
COOL
2
HEAT
Press
PROGRAM
Press the PROGRAM button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Note: *To increase the spread between the heating and cooling setpoints, press the MODE button until only the heat setpoint is displayed. Adjust the desired setpoint. Press the MODE button until only the cool setpoint is displayed. Adjust the desired setpoint. Press the MODE button again to enter the Auto-Changeover mode where both the heat and cool setpoints are displayed.*

Adjusting the Cycles Per Hour

The Cycles Per Hour setting may limit the number of times per hour your HVAC unit may energize. For example, at a setting of 6 cycles per hour the HVAC unit will only be allowed to energize once every 10 minutes. The Cycles Per Hour limit may be overridden and reset by pressing the UP or DOWN buttons on the thermostat.


MODE
PROGRAM
Press the MODE button. While holding the MODE, press the PROGRAM button to enter Setup screens.
Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.
MODE
Press the MODE button repeatedly until this setup screen appears.
Setup
14
6 cy
Select the cycles per hour limit.
d=cycles per hour limit defeated.
d1=d + defeat 5 min. compressor lockout.
(d1, d, 2 - 6)
Press
PROGRAM
Press the PROGRAM button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Adjusting the Deadband

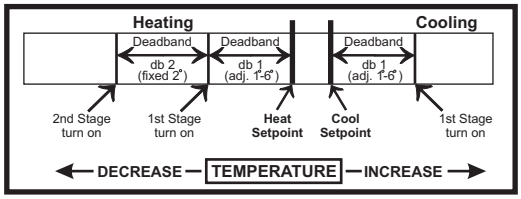
MULTI-STAGE OPERATION - Controls up to two Heat and one Cool stages.

The **2nd Stage** of heat is turned on when:

(**A**) The 1st Stage has been on for a minimum of two minutes.

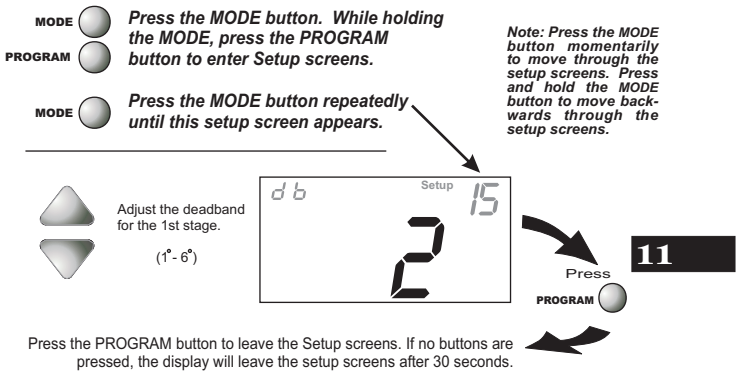
And

(**B**) The temperature spread from the setpoint is equal to or greater than: *the setpoint plus the 1st stage deadband (step #15, next page), plus two degrees.*



Adjusting the Deadband

For more detailed information, please see the explanation on the previous page.


MODE
PROGRAM
Press the MODE button. While holding the MODE, press the PROGRAM button to enter Setup screens.
MODE
Press the MODE button repeatedly until this setup screen appears.
Note: Press the MODE button momentarily to move through the setup screens. Press and hold the MODE button to move backwards through the setup screens.
Adjust the deadband for the 1st stage.
(1°- 6°)
d b
Setup
15
2
Press
PROGRAM
11
Press the PROGRAM button to leave the Setup screens. If no buttons are pressed, the display will leave the setup screens after 30 seconds.

Section 12 Contents:

- *Resetting the Thermostat to the Factory Default Settings.....12.2*
- *Calibrating the Temperature Sensor.....12.3*

Resetting the Thermostat to the Factory Default Settings (*for default values see page 14.1*)

If, for any reason, you desire to return all the stored settings back to the factory default settings, follow the instructions below.

WARNING: This will reset all Time Period and Advanced Programming to the default settings. Any information entered prior to this reset may be permanently lost.

1

MODE

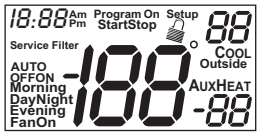
Place the thermostat in the OFF mode.

2

MODE

FAN

Press and hold the MODE button. While holding the MODE button, press and hold the FAN button for 5 seconds. All icons will appear on the display.



3

FAN

After all of the icons appear, release the MODE and FAN buttons. Then press and hold the FAN button for 5 seconds.

4

MODE

After the letters **Fd** appear on the display (Factory Default), release the FAN button. Press the MODE button **once** to return to normal operation.

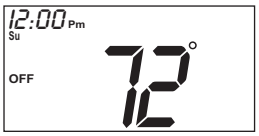
VENSTAR®

Calibrating the Temperature and Humidity Sensors

Under normal circumstances it will not be necessary to adjust the calibration of the temperature and humidity sensors. If calibration is required, please contact a trained HVAC technician to correctly perform the following procedure.

1 MODE

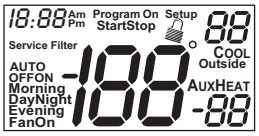
Place the thermostat in the OFF mode.



2 MODE

FAN

Press and hold the MODE button. While holding the MODE button, press and hold the FAN button for 5 seconds. All icons will appear on the display.



12

3 PRESS

TWICE

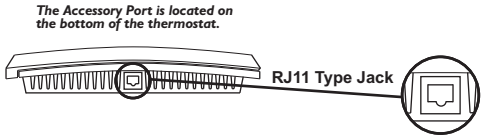
THERMOSTAT SENSOR

Press the UP and DOWN buttons at the same time twice. The thermostat temperature will be displayed and may be calibrated using the UP or DOWN buttons.

CALIBRATE

After calibration is complete, press the MODE button **once** to return to normal operation.

ACCESSORY PORT - The RJ11 Jack is used to connect the T1700 to the IR Receiver (ACC0431) for wireless communication or the EZ Programmer (ACC0432) for easy downloading or uploading of thermostat information.



IR RECEIVER / REMOTE CONTROL (optional accessory) - When the IR Receiver is connected, the thermostat can be controlled using an IR Remote Control. The thermostat may also interface with other wireless systems in your home. For more information see the manual for the IR Receiver (ACC0431).

EZ PROGRAMMER (optional accessory) - When the EZ Programmer is connected, the thermostat Time Period Programming and Advanced Setup Programming can be stored into the EZ Programmer's memory. This information can then be uploaded to other T1700 thermostats. For more information see the manual for the (ACC0432).

COMFORT CALL (optional accessory) - When Comfort call is connected, the thermostat's Heating and cooling functionality may be accessed and controlled through the phone. For more information see the manual for Comfort Call (ACC0433).

SECTION 14

Advanced Setup Table

VENSTAR®

Step#	Description	Pg#	Range	Df *
1	Programmable Thermostat	4.2	Yes/No	Yes
2	Auto-Changeover Thermostat	4.3	Yes/No	Yes
3	Fan Off Delay	7.3	0, 30, 60, 90	0
4	Thermoglow Backlight	8.2	Auto/On/ Off	Auto
5	F or C	8.2	F/C	F
6	Reset Service Filter Icon	9.2	read only	- -
7	Service Filter Run Time Set	9.2	0 - 1950	0
8	Reset UV Light Icon	9.3	read only	- -
9	UV Light Run-Time Set	9.3	0 - 1990	0
10	Heatpump Jumper Setting	10.2	read only	- -
11	Reversing Valve Jumper Setting	10.2	read only	- -
12	Electric Heat	10.3	read only	- -
13	Minimum Heat/Cool Differential	11.2	0 - 6°	2°
14	Cycles Per Hour	11.3	d1, d, 2-6	6
15	Deadband/Temp. Swing	11.5	1° - 6°	2°

***Df = Factory Default Setting**

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SECTION 16
Warranty

VENSTAR®

One-Year Warranty - This Product is warranted to be free from defects in material and workmanship. If it appears within one year from the date of original installation, whether or not actual use begins on that date, that the product does not meet this warranty, a new or remanufactured part, at the manufacturer's sole option to replace any defective part, will be provided without charge for the part itself provided the defective part is returned to the distributor through a qualified servicing dealer.

THIS WARRANTY DOES NOT INCLUDE LABOR OR OTHER COSTS incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts or replacement parts. Such costs may be covered by a separate warranty provided by the installer.

THIS WARRANTY APPLIES ONLY TO PRODUCTS IN THEIR ORIGINAL INSTALLATION LOCATION AND BECOMES VOID UPON REINSTALLATION.

LIMITATIONS OF WARRANTIES – ALL IMPLIED WARRANTIES (INCLUDING IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY) ARE HEREBY LIMITED IN DURATION TO THE PERIOD FOR WHICH THE LIMITED WARRANTY IS GIVEN. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESSED WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON WHATSOEVER. ALL WORK UNDER THE TERMS OF THIS WARRANTY SHALL BE PERFORMED DURING NORMAL WORKING HOURS. ALL REPLACEMENT PARTS, WHETHER NEW OR REMANUFACTURED, ASSUME AS THEIR WARRANTY PERIOD ONLY THE REMAINING TIME PERIOD OF THIS WARRANTY.

THE MANUFACTURER WILL NOT BE RESPONSIBLE FOR:

1. Normal maintenance as outlined in the installation and servicing instructions or owner's manual, including filter cleaning and/or replacement and lubrication.
2. Damage or repairs required as a consequence of faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
4. Damage as a result of floods, winds, fires, lightning, accidents, corrosive environments or other conditions beyond the control of the Manufacturer.
5. Parts not supplied or designated by the Manufacturer, or damages resulting from their use.
6. Manufacturer products installed outside the continental U.S.A., Alaska, Hawaii, and Canada.
7. Electricity or fuel costs or increases in electricity or fuel costs for any reason whatsoever including additional or unusual use of supplemental electric heat.
8. ANY SPECIAL INDIRECT OR CONSEQUENTIAL PROPERTY OR COMMERCIAL DAMAGE OF ANY NATURE WHATSOEVER. Some states do not allow the exclusion of incidental or consequential damages, so the above may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.